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Stewart Development Traffic Impact Analysis

Jurisdiction: City of Arlington

May 2022



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1. INTRODUCTION

Gibson Traffic Consultants, Inc. (GTC) has been retained to analyze the traffic impacts of the proposed Stewart Development. The proposed development is located on the south side of Highland Drive between French Avenue and Stillaguamish Avenue. A site vicinity map is included in Figure 1. The development is proposed to consist of 18 multifamily residential units, ~~two~~three buildings each with six units ~~and one building with five units~~.

Brad Lincoln, responsible for this report, is a licensed professional engineer (Civil) in the State of Washington and member of the Washington State section of the Institute of Transportation Engineers (ITE).

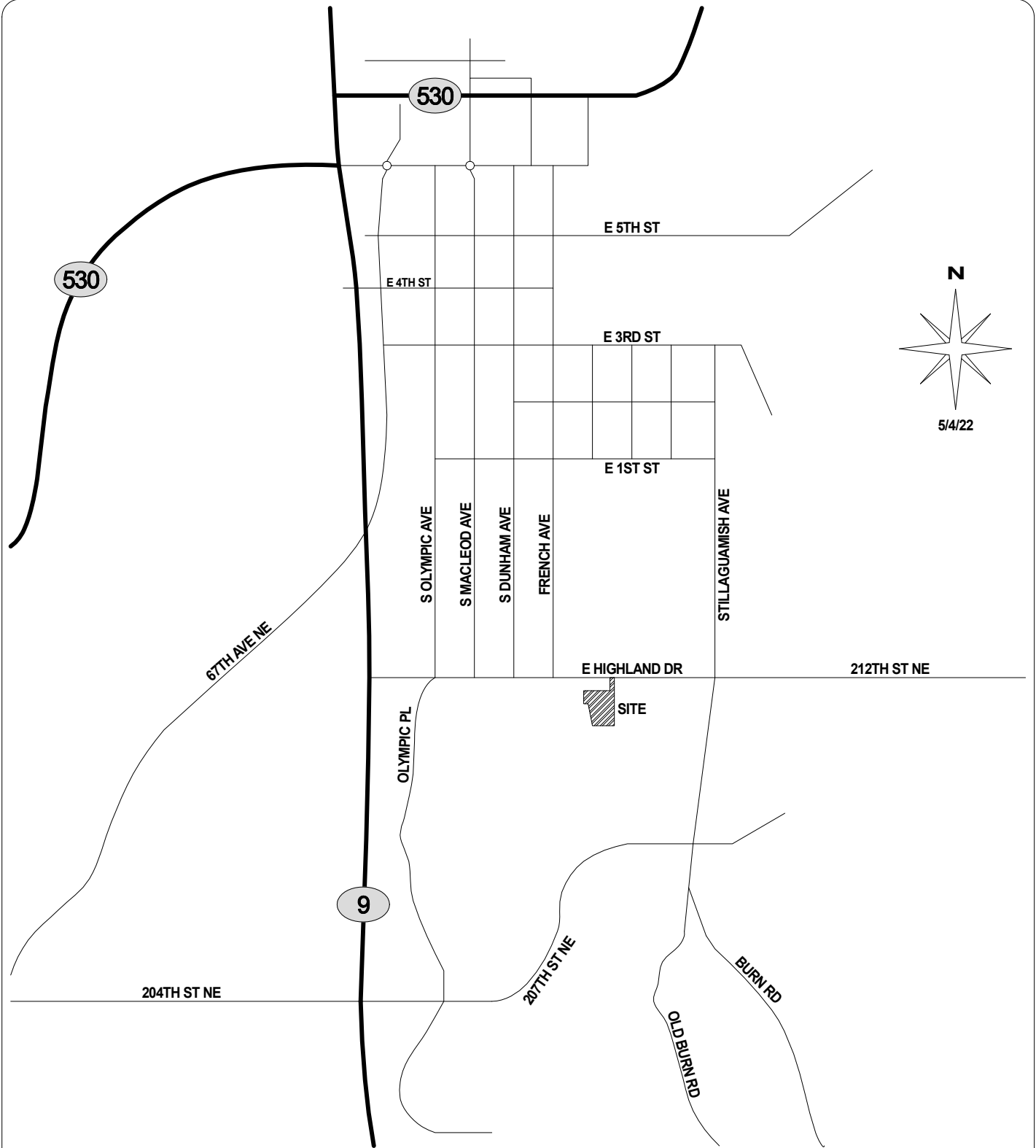
2. TRIP GENERATION

The trip generation calculations for the Stewart Development are based on data published by the Institute of Transportation Engineers (ITE) in the *Trip Generation Manual, 10th Edition (2017)*. The average trip generation rates for ITE Land Use Code 220, Multifamily Housing (Low-Rise), have been utilized for the trip generation calculations since the ~~178~~178 units will be grouped into buildings with five or more units. The trip generation of the ~~178~~178 new units of the Stewart Development is summarized in Table 1.

Table 1: Trip Generation Summary

18 New Multifamily Housing (Low-Rise)	Average Daily Trips			AM Peak-Hour Trips			PM Peak-Hour Trips		
	Inbound	Outbound	Total	Inbound	Outbound	Total	Inbound	Outbound	Total
Generation Rate	7.32 trips per unit			0.46 trips per unit			0.56 trips per unit		
Splits	50%	50%	100%	23%	77%	100%	63%	37%	100%
Trips	66	66	132	2	6	8	6	4	10

The Stewart Development is anticipated to generate 132 average daily trips with 8 AM peak-hour trips and 10 PM peak-hour trips. The ITE trip generation data is included in the attachments.



GIBSON TRAFFIC CONSULTANTS

TRAFFIC IMPACT STUDY
GTC #21-236

STEWART DEVELOPMENT
18 RESIDENTIAL UNITS

LEGEND



DEVELOPMENT SITE

FIGURE 1
SITE VICINITY
MAP

CITY OF ARLINGTON

3. TRIP DISTRIBUTION

The trip distribution for the Stewart Development is based on previously approved distributions in the site vicinity and surrounding uses. It is anticipated that 25% of the trips generated by the development will travel to and from the north along S Stillaguamish Avenue. An estimated 75% of the trips generated by the development will travel along SR-9, fifteen percent to and from the north and sixty percent to and from the south. Approximately 10% of the trips generated by the development will travel to and from the north along French Avenue. The remaining 15% of the trips generated by the development are anticipated to travel to and from the south along Olympic Place. Detailed distributions for the AM and PM peak-hours are shown in Figure 2 and Figure 3, respectively.

The interlocal agreement between the City of Arlington and Snohomish County requires detailed development trip turning movement data at Snohomish County key intersections. The trips generated by the Stewart Development are not anticipated to impact any Snohomish County key intersection during the AM and PM peak-hours.

4. TRAFFIC MITIGATION FEES

The City of Arlington collects traffic mitigation fees based on the number of PM peak-hour trips generated by a development. The City of Arlington also has interlocal agreements with Snohomish County and WSDOT for traffic mitigation fees.

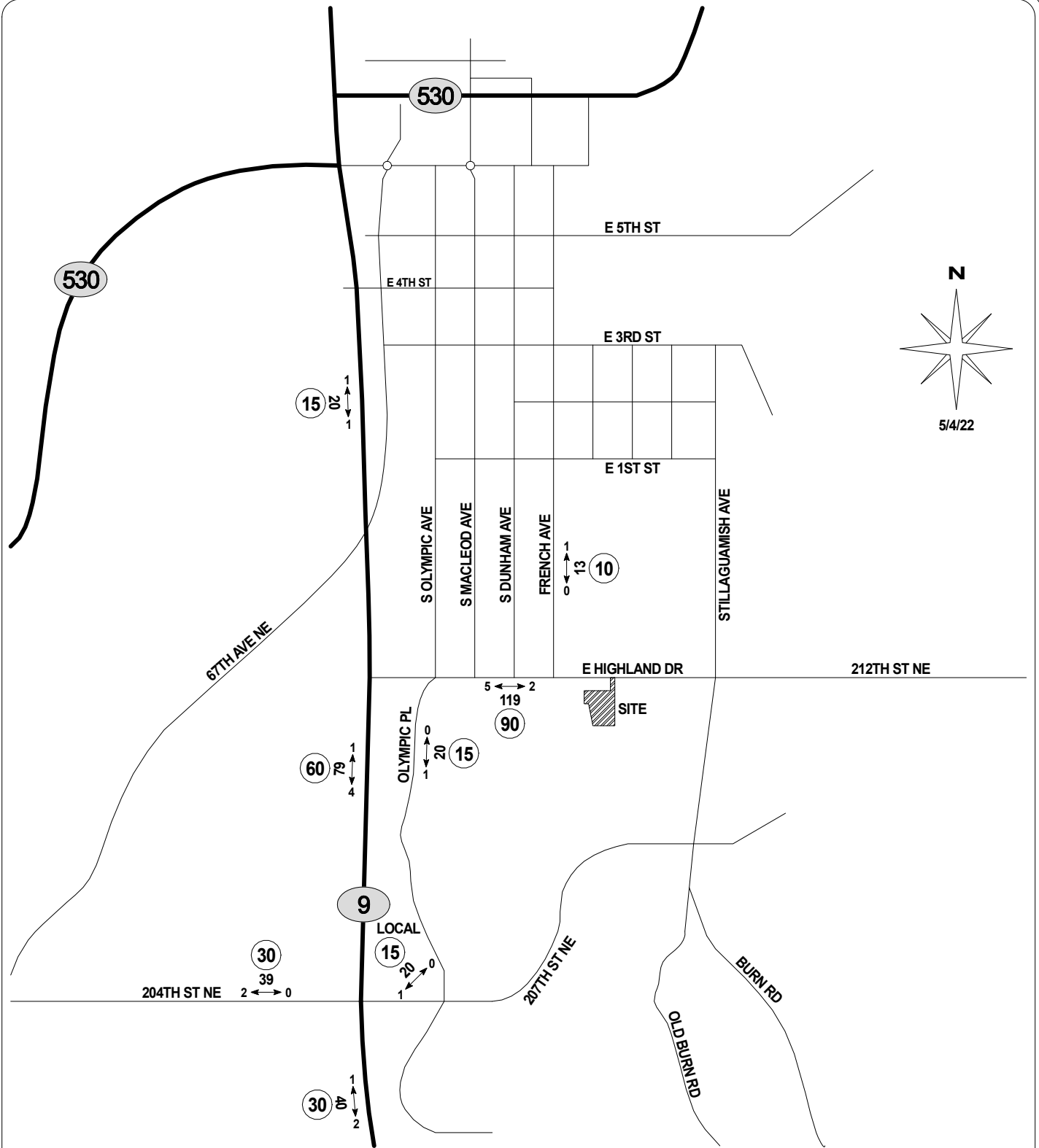
4.1 City of Arlington

The City of Arlington currently has a traffic mitigation fee of \$3,355 per PM peak-hour trip. The Stewart Development is anticipated to generate 10 new PM peak-hour trips. These trips result in a City of Arlington traffic mitigation fees of \$33,550.00.

It is important to note that City of Arlington traffic mitigation fees do not vest to the time of application. It is possible that the City of Arlington mitigation fees will increase between the time of this report and when the traffic mitigation fees are required to be paid.

4.2 Washington State Department of Transportation

WSDOT improvement projects and their associated fees are based on the most recent Exhibit C list, which is part of the interlocal agreement between Snohomish County and WSDOT and included in the attachments. WSDOT traffic mitigation fees are required for City of Arlington developments when WSDOT improvement projects on the Exhibit C list are impacted with 10 or more PM peak-hour trips. There are not any WSDOT projects on the Exhibit C List that will meet this threshold. WSDOT traffic mitigation fees should therefore not be required for the Stewart Development.



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TRAFFIC IMPACT STUDY
GTC #21-236

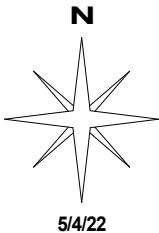
STEWART DEVELOPMENT
18 RESIDENTIAL UNITS

LEGEND
AWDT
AM ↔ PEAK
(XX)

NEW DAILY TRAFFIC
NEW AM PEAK-HOUR TRIPS
TRIP DISTRIBUTION %

FIGURE 2
TRIP DISTRIBUTION
AM PEAK-HOUR

CITY OF ARLINGTON



TRIP DISTRIBUTION PM PEAK-HOUR

4.3 Snohomish County

The City of Arlington has an interlocal agreement with Snohomish County that provides for mitigation payments for impacts to Snohomish County arterials. Snohomish County traffic mitigation fees are required for City of Arlington developments when improvements identified in Snohomish County's *Transportation Needs Report* (TNR) are impacted with 3 directional PM peak-hour trips. There are no improvement projects identified in Snohomish County's TNR that will be impacted by 3 or more directional PM peak-hour trips generated by the Stewart Development. Snohomish County traffic mitigation fees should therefore not be required for the Stewart Development.

5. CONCLUSIONS

The proposed Stewart Development is located on the south side of Highland Drive, between French Avenue and Stillaguamish Avenue. The development is proposed to consist of 18 multifamily residential units. The Stewart Development is anticipated to generate 132 new daily trips with 8 new AM peak-hour trips and 10 new PM peak-hour trips.

The Stewart Development will have a total traffic mitigation fee of \$33,550.00 for the impacts to the City of Arlington. Traffic mitigation fees to WSDOT or Snohomish County should not be required. It is important to note that the City of Arlington traffic mitigation fees do not vest and could increase in the future.

ITE Trip Generation Data

Multifamily Housing (Low-Rise) (220)

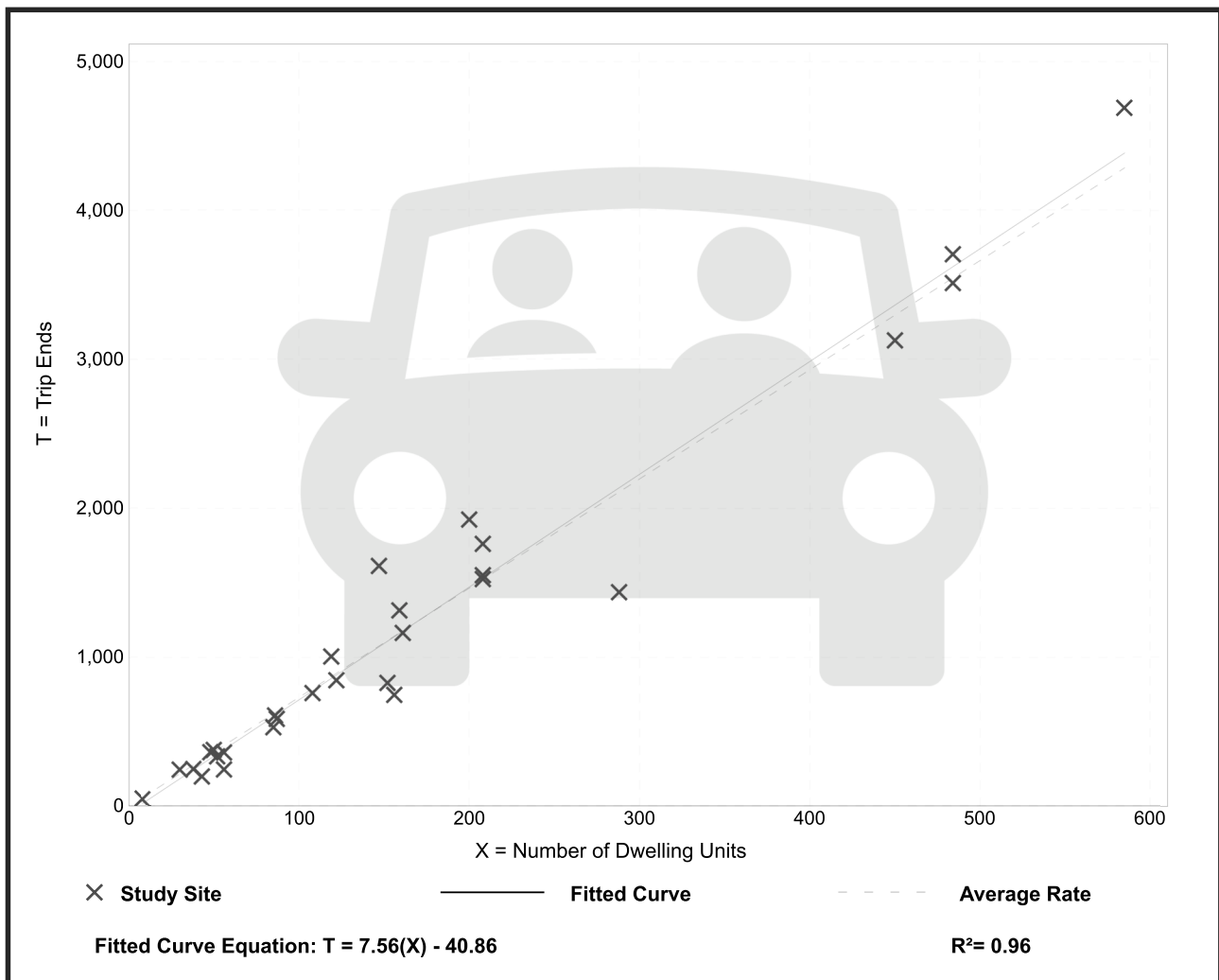
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 29
Avg. Num. of Dwelling Units: 168
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
7.32	4.45 - 10.97	1.31

Data Plot and Equation



Multifamily Housing (Low-Rise) (220)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 42

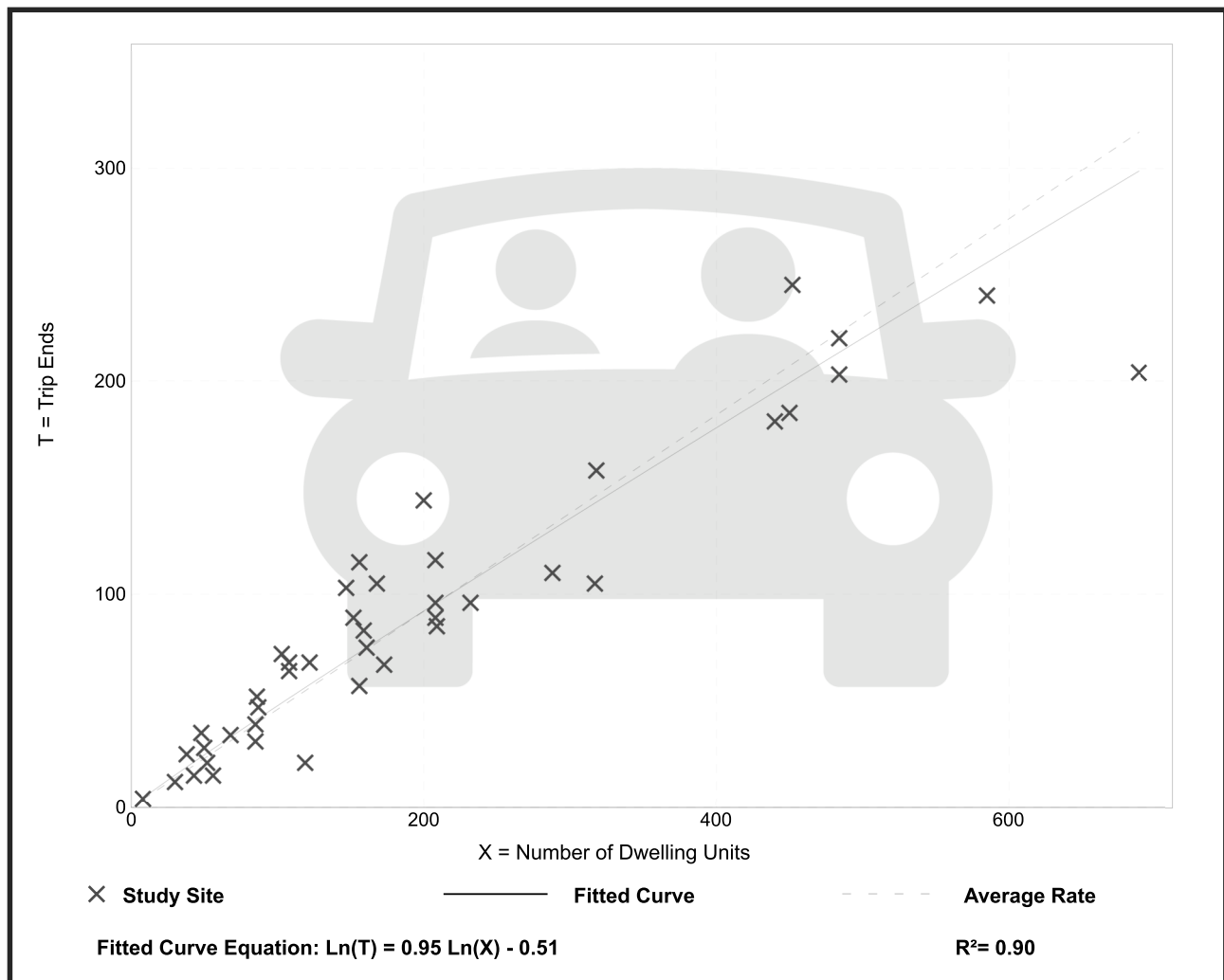
Avg. Num. of Dwelling Units: 199

Directional Distribution: 23% entering, 77% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.46	0.18 - 0.74	0.12

Data Plot and Equation



Multifamily Housing (Low-Rise) (220)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 50

Avg. Num. of Dwelling Units: 187

Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.56	0.18 - 1.25	0.16

Data Plot and Equation

